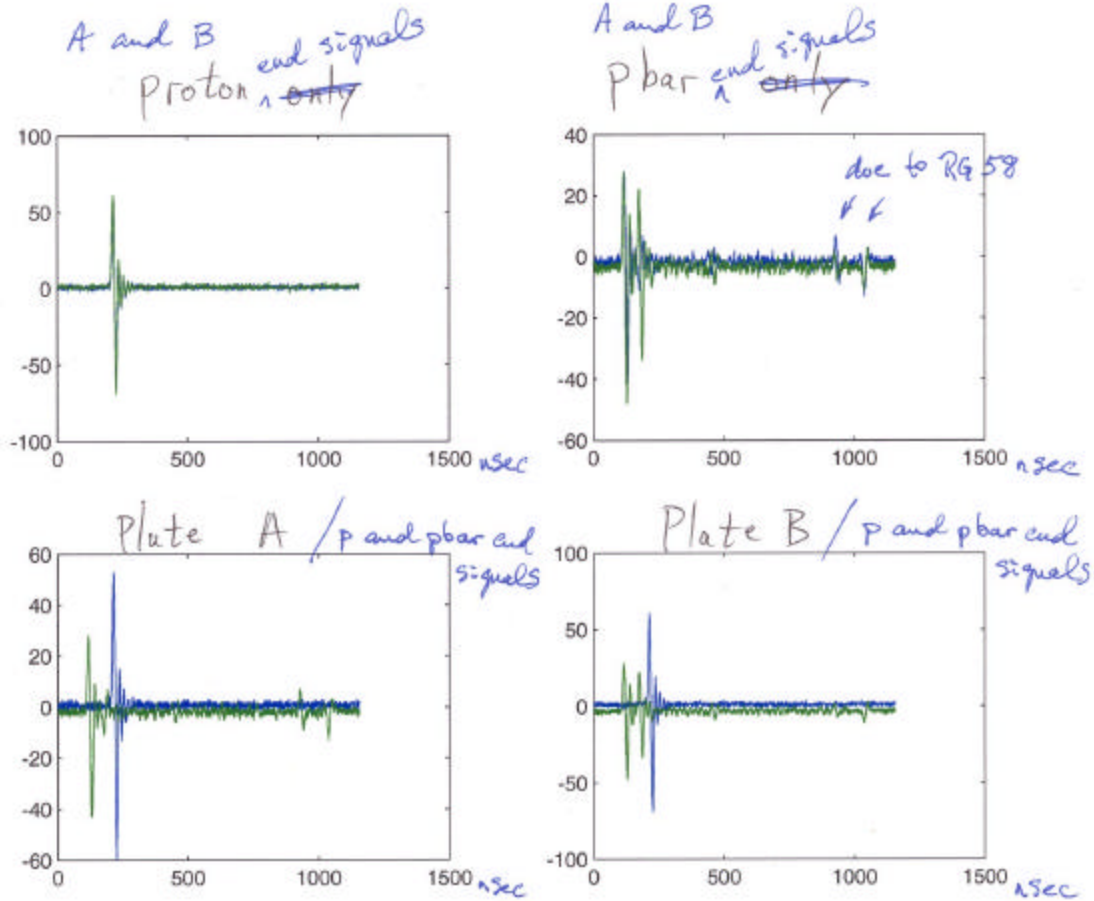


# Beam Signals From A14

Proton Only Single Bunch Store  
A14



Proton signals observed thru 20 db atten  
Pbar " " " no atten

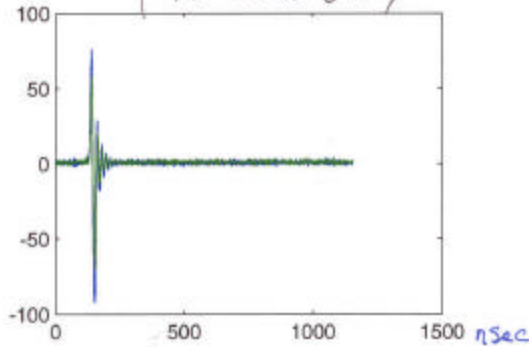
All signals through 70 MHz low-pass filters.

# Beam Signals From A15

Proton Only Single Bunch Store

A15

A and B  
Proton ~~only~~ end signals



A and B  
pbar ~~only~~ end signals

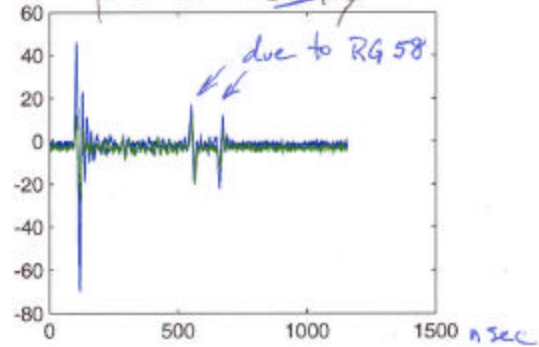


Plate A / p and pbar  
end signals

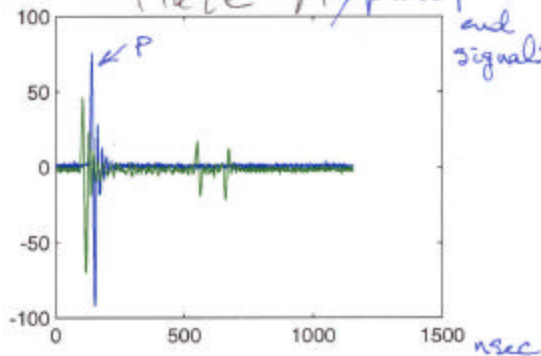
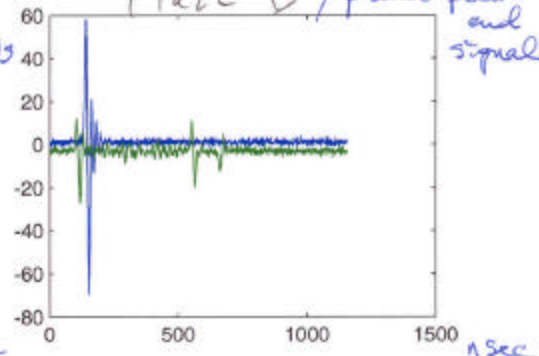


Plate B / p and pbar  
end signals

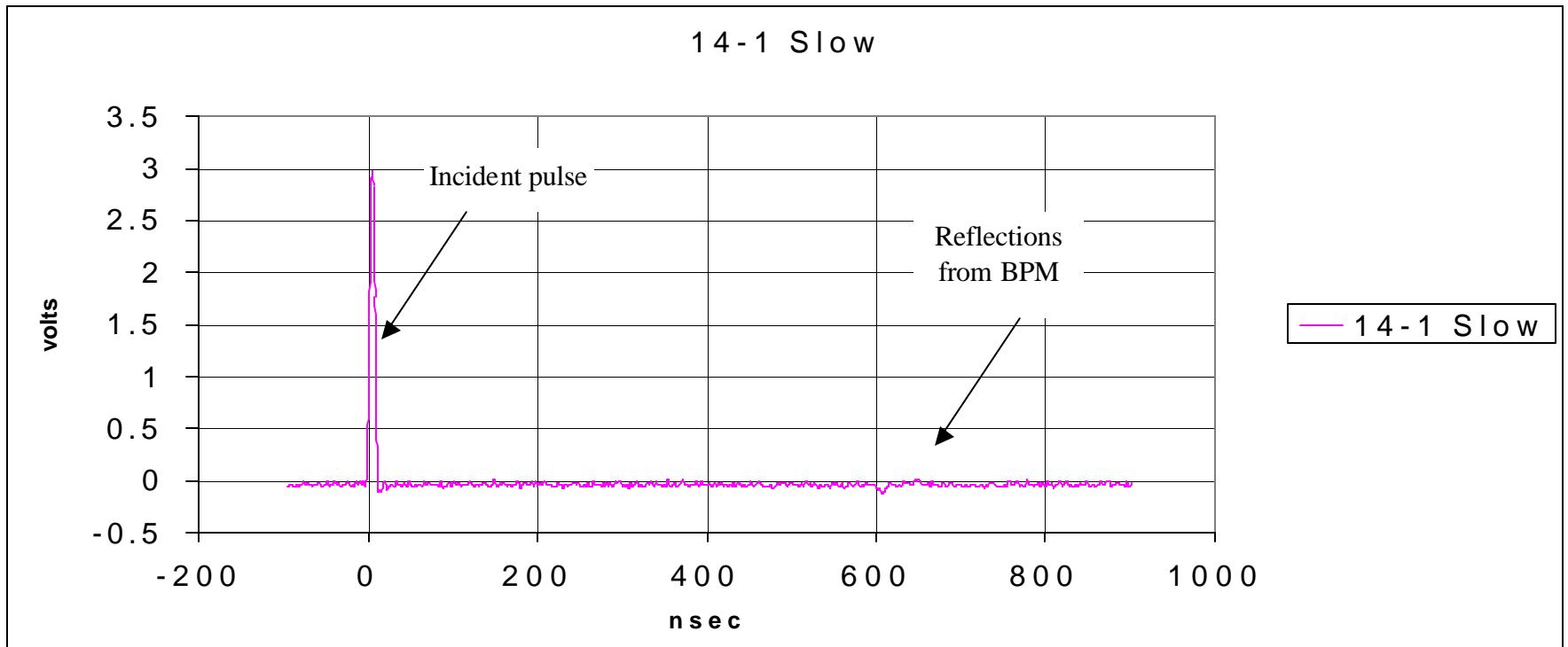


Proton signals observed thru 20 db atten  
Pbar " " " no atten

All signals through 70 MHz low-pass filters.

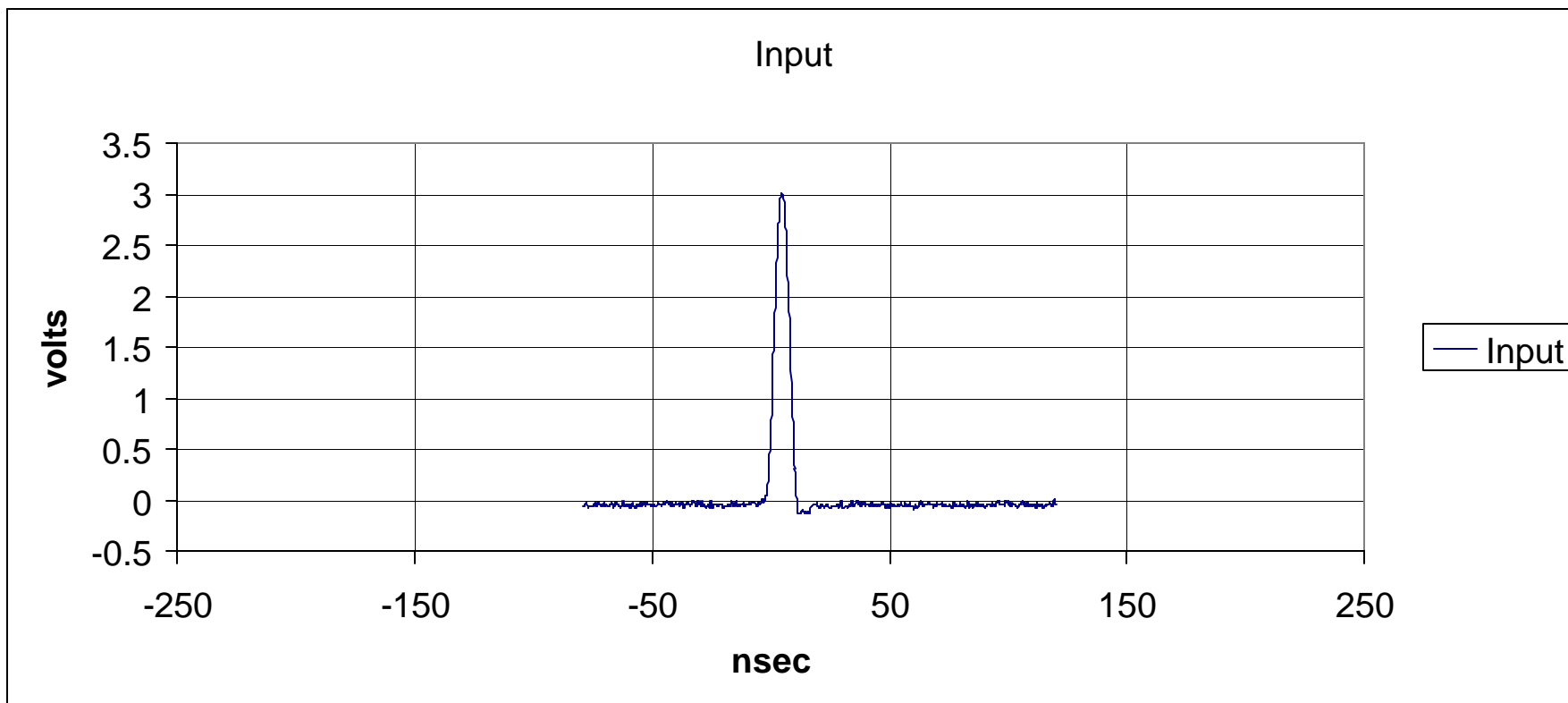
# TDR Tests of A14 and A15 Signal Paths

Test pulse injected into Pbar cable in service building and reflections observed.

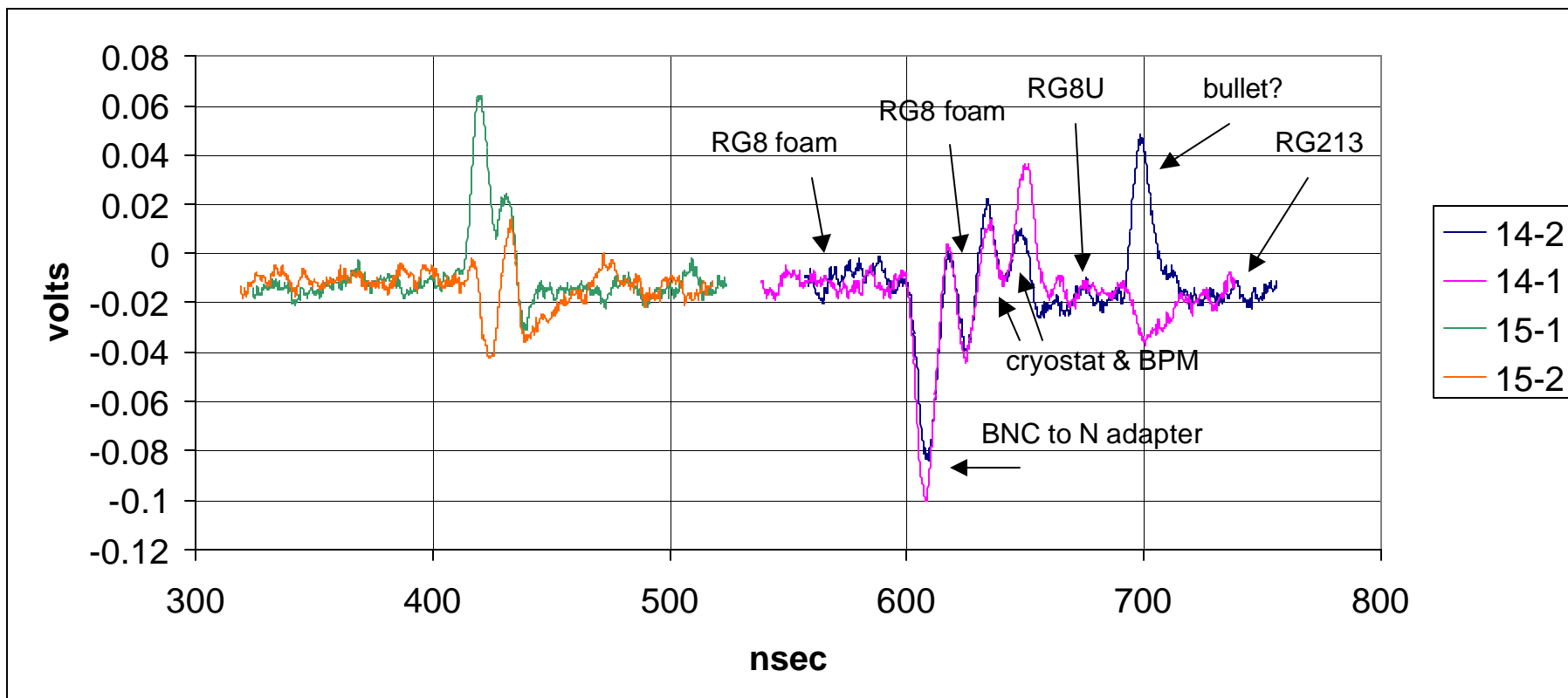


A14-1 path showing injected pulse and reflections.

# Test Pulse



## Reflections From Near BPM



A14 had multiple extensions and adapters in tunnel; from pbar foam RG8 cable to BNC-to-N adapter to 12' foam RG8 jumper to cryostat pbar signal feed-through through cryostat cables and BPM to proton signal cryostat feed-through to 20' RG8/U extension to RG213 cable to service building.